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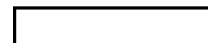
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PHOTOGRAPHIC INTERPRETATION REPORT



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**HANDLING EQUIPMENT  
AND LOADING PROCEDURES  
ASSOCIATED WITH SOVIET  
TYPE IIIC ICBM SILOS**



MAY 1967

COPY **116**

11 PAGES

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# HANDLING EQUIPMENT AND LOADING PROCEDURES ASSOCIATED WITH SOVIET TYPE IIIC ICBM SILOS

Continuing analysis of [ ] photography of the 6 known Type IIIC ICBM complexes indicates that 3 pieces of equipment are associated with the operation of loading a missile (believed to be the SS-9) into the launch silo. The 3 pieces are a missile erector/loader, and first- and second-stage missile-transporter dollies. Support equipment associated with the loading operation includes checkout vans, re-entry vehicle vans, prime movers, pick-up trucks, small truck-mounted cranes, and 3 or 4 unidentified types of vehicles.

The configuration of the missile erector/loader (Figure 1) was determined from very good stereoscopic coverage of Launch Site 5 at Imeni Gastello (Figure 2) and Launch Site 4 at Zhangiz-Tobe (Figure 3). The body, or undercarriage, is only a probable configuration determined from a correlation of [ ] photography, shadow studies, and Soviet magazine photographs (Figure 4). Measurements obtained from sightings at Launch Site 4 at Zhangiz-Tobe [ ] and the rail-to-road transfer point at Uzhur [ ]

The correlation of information derived from the Soviet magazine photographs, [ ] photography of Launch Site 10 (Type IIIA) at Yurya, Soviet motion picture films, and a published report 1/ on Launch Site 3 (Type IIIA) at Olovyannaya led to the conclusion that the same type of equipment -- identified as a probable ICBM transporter/erector -- was involved in each instance. Further analysis showed that this type of equipment also had been present at numerous other Type IIIA launch sites, and at the Tyuratam Missile Test Center. A similar, if not identical piece of equipment was first

reported at Type IIIC sites (Launch Site 5, Imeni Gastello and Launch Site 4, Zhangiz-Tobe) on [ ] The sighting of this equipment at both Type IIIA (SS-7) and Type IIIC (SS-9) sites is consistent with the belief that the SS-9 missile is an advanced version of the SS-7.

A review of Type IIIC ICBM complexes revealed additional sightings of the missile erector/loader, as follows:

Complex/Component	No of Erectors/loaders
[ ]	[ ]
Uzhur, Rail-to-road Transfer Point	1
Aleysk, Launch Site 3	2
Kartaly, Rail-to-road Transfer Point	1
Uzhur, Rail-to-road Transfer Point	1
Zhangiz-Tobe, Launch Site 7	1
Zhangiz-Tobe, Launch Site 11	1
[ ]	[ ]
Dombarovskiy, Rail-to-road Transfer Point	1
Kartaly, Rail-to-road Transfer Point	1
Uzhur, Rail-to-road Transfer Point	1
Zhangiz-Tobe, Rail-to-road Transfer Point	2

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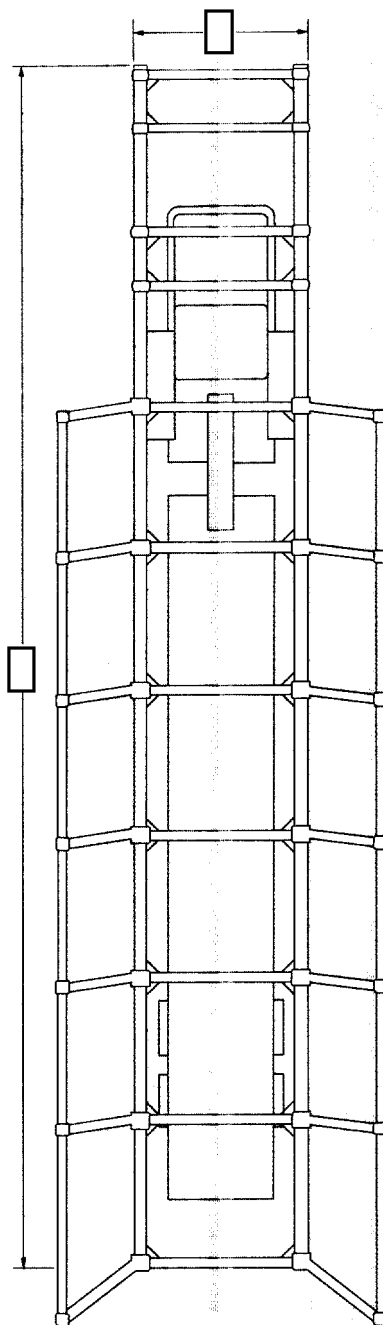
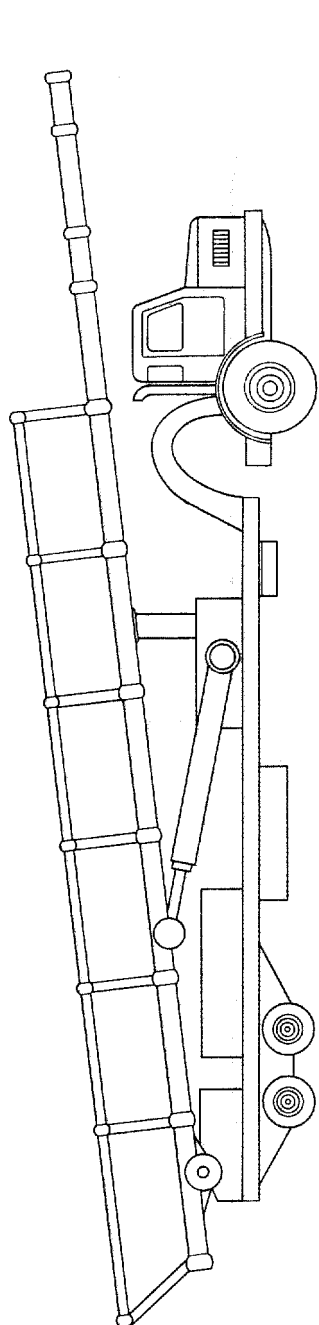


FIGURE 1. CONFIGURATION OF MISSILE ERECTOR/LOADER, TYPE IIIIC ICBM LAUNCH SITES.

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suggests that the missile is mated in the silo [redacted] Truck-mounted cranes are used to mate the warhead.

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A review of Type IIC complexes revealed additional observations of missile-transporter dollies, as follows:

Mission/Date	Complex/Component	No of Dollies/Sets
[redacted]	[redacted]	[redacted]
	Aleysk, Launch Site 3 (Figure 6)	1 Set (open)
	Zhangiz-Tobe, Rail-to-road Transfer Point (Figure 7)	2 Sets (open)
	Imeni Gastello, Launch Site 2	1 Set* (canvas covered)
	Dombarovskiy, Launch Sites 11, 12, and 13	1 Set, each (canvas covered)
	Uzhur, Rail-to-road Transfer Point	3 Sets (canvas covered)
	Kartaly, Rail-to-road Transfer Point	2 Sets (canvas covered)
		1 Set (open)

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The probable missile-handling and silo-loading procedure, as conjectured from this analysis of the handling equipment, is outlined below. The missile (in stages) arrives at the rail-to-road transfer point in [redacted] rail cars. A set of missile-transporter dollies is hauled by prime mover to the unloading dock, where the missile is transferred and canvas covered for protection. The missile is subsequently taken to the missile assembly/check-out building. Photographic evidence indicates that the missile is transferred from a set of dollies to the erector/loader at the launch site. The exact method of this transfer, or the reason for it, is difficult to analyze and has not been determined. The erector/loader is raised to facilitate lowering the complete missile, or missile stage, into the silo. Photography of Launch Site 3 at Aleysk on [redacted]

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\*Observed in static position on 3 consecutive days.

\*\*1 dolly parked in front of missile assembly/checkout building; mate (short dolly) probably inside building.

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FIGURE 3. MISSILE ERECTOR/LOADER AT LAUNCH SITE 4, ZHANGIZ-TOBE ICBM COMPLEX.

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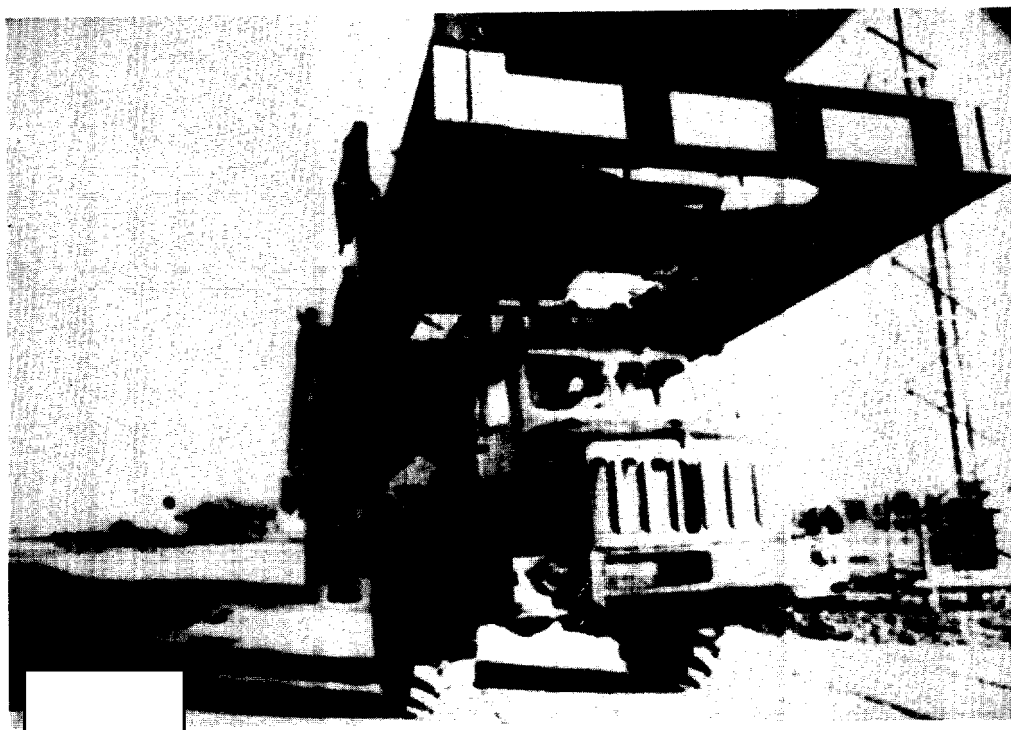
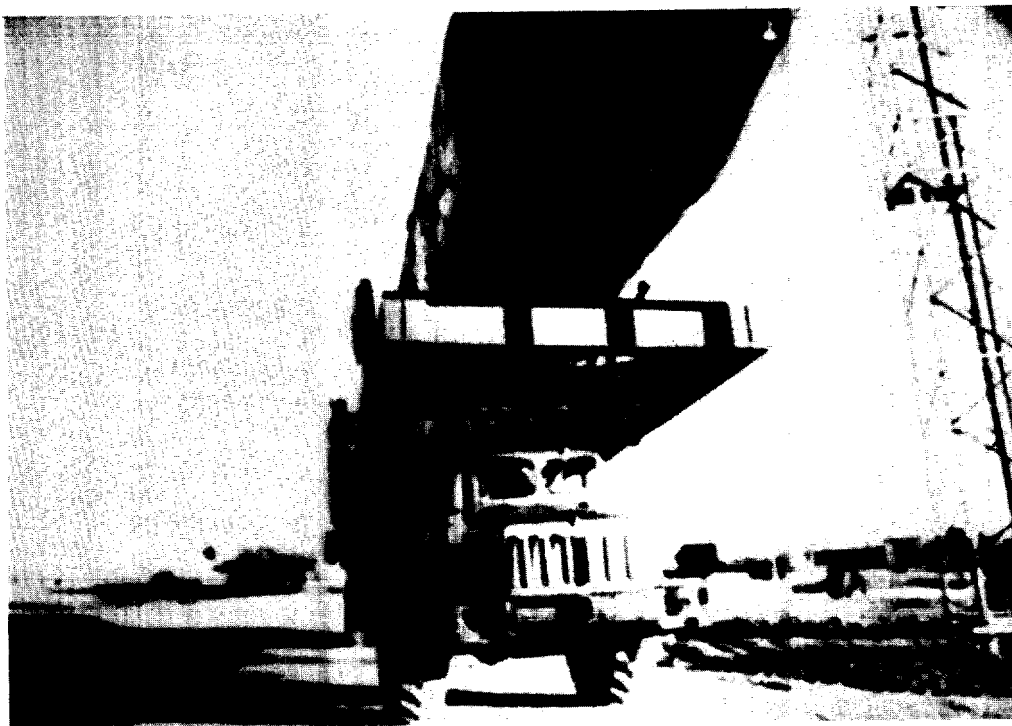


FIGURE 4. SOVIET MAGAZINE PHOTOGRAPHS OF MISSILE ERECTOR LOADER.

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FIGURE 7. MISSILE-TRANSPORTER DOLLIES AT RAIL-TO-ROAD TRANSFER POINT, ZHANGIZ-TOBE ICBM COMPLEX.

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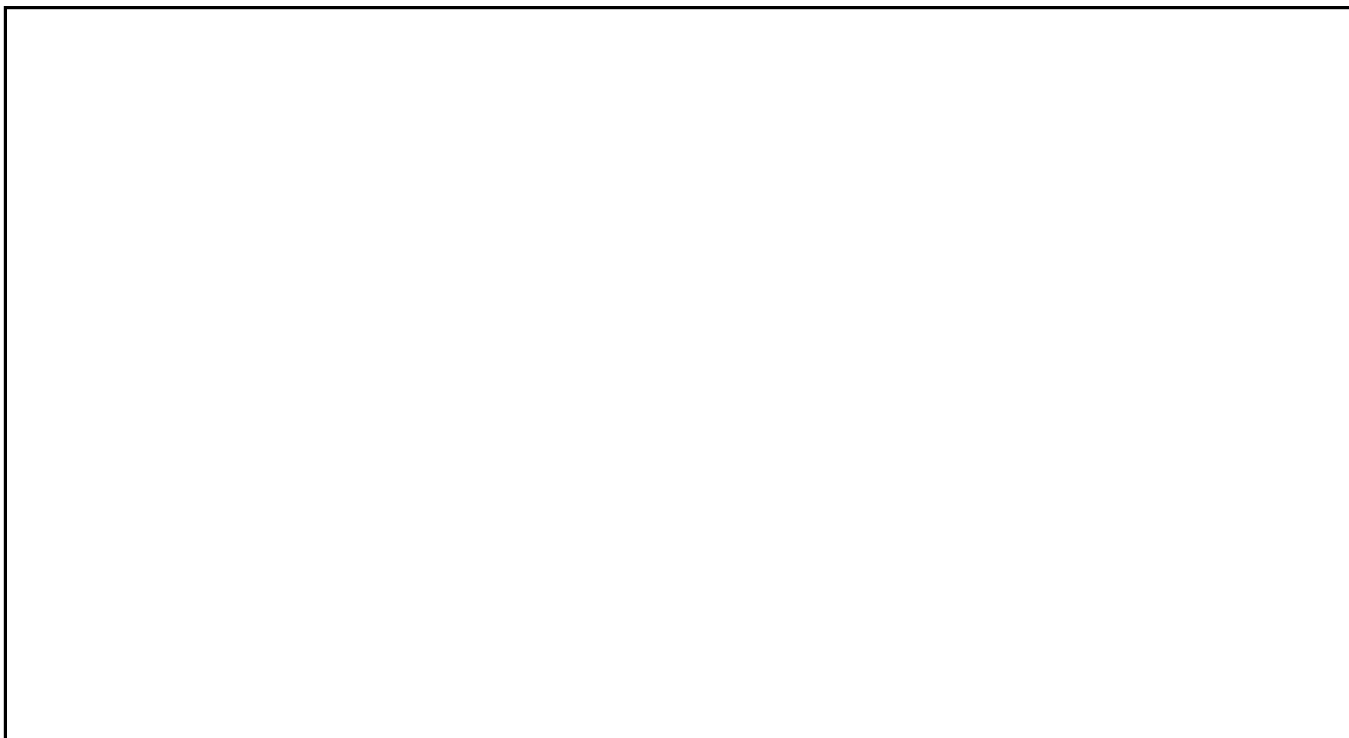
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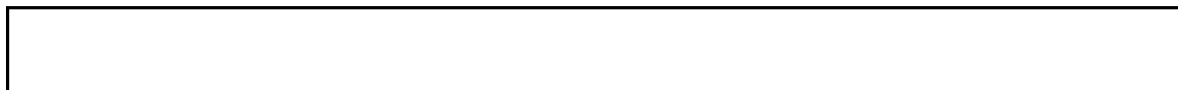
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